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Source Material on Agriculture's Conservation Objective

A. THE PHILOSOPHIC CONCEPT

I. AMERICA CAN CHOOSE

There has continually flamed in the heart of Americans the belief that this continent was different. On this new soil, we have thought, mankind would escape from the compulsions, the suspicions and the greeds of the Old World.

It is a simple faith, rather childlike, perhaps, in this troubled time, with so much of the civilized world at war again, sick at heart, and weary. Even so, our belief remains. We believe that in this New World we have heard the call of destiny and will build here an even newer world, wherein there shall be comfort and security, and freedom and dignity for all. We believe that we are destined to create on this newer soil a higher standard of living and a more universal distribution of happiness.

It is a real faith, wherever you find it -- here in our States, among the twenty sister republics to the South, or in the Dominion of Canada, the American faith is real and glorious. And if our faith can be made to work here at home, at first, and possibly then more widely, it will remain a real hope in the world's future.

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Pressing this point in the closing chapter of a book that he wrote three years ago Secretary Wallace tried to show how the ideas which led our European forebears to quite Europe have operated to transform the American landscape, our religious and social forms and the political and economic institutions of our land. With a passion for liberty, and a vast restlessness, we turned from old Europe to possess and form a new habitation, a new hope, on Earth. Not all of the American growths which have resulted are, of course, admirable. We have, on the one hand, as fruit of the tree of liberty, the Constitution, the Bill of Rights, the Lincoln Memorial, the public school system. We have, on the other hand, as the result of an almost anarchistic pioneer sense of irresponsibility and recklessness, such social sores as the cotton gullies and near peonage of some sections of the South, the Dust Bowl, gangsterism in some of our great cities, and occasional outbreaks of lynching and vigilante spirit.

Yes, the ideas and impulses we brought with us from Europe have reshaped this land and its civilization, for good and for ill. But it is also true that the land, so conquered and reshaped, is continually exerting an influence on our thinking. Ideas do manifest themselves in the world of hard physical facts; but it is equally true that hard physical facts have a continuous effect on the world of ideas; and we may strongly suspect that under pressure of changed situations brought mainly within the present century upon our people, that we all stand more ready now than we did even ten years ago to change our minds, and in some part to change our ways.

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With an almost maniac vigor we have destroyed or wounded a considerable part of our common basic wealth in this country. We have ripped open and in some part devitalized millions of acres of soil. We have slashed down forests and turned with fire to dust and ashes millions of acres of timberland. We have torn up grassland and left the earth to blow away, we have shallowed and befouled our streams, rivers, and other living waters. We have built great reservoirs and power plants and let them be crippled with silt and debris from the uplands; over a considerable area, in actual truth, we have permitted the continental water system to become deranged. Because of our headstrong greed or heedlessness, whole species of valuable wildlife forms have passed out of existence or been greatly diminished. By wastrel mining we have gutted and diminished our oil and mineral reserves. And in doing all this, we have made much of our country ugly, unnaturally ugly; ugly to look at, ugly to live in; and even more ugly in the plain implication that land laid to waste, such as this, will not support that measure of individual freedom, and those constantly higher standards of living, which we as Americans have been led to expect.

Society may move, however, to mend and restore what society has maimed or wounded. Man can develop a harmonious relationship between himself and the world of hard physical fact. He can recognize the realities he is up against, and nevertheless rise superior to them. Perhaps if we Americans cared even half as much to study the processes of eternal mechanics by which clouds form and move, soils laid down, and life supported -- if we were even half as interested in such things as we are in the mechanics of gas trans-





portation, we could rather soon farm our continent safely, and transform it into the garden spot of the world.

A whole book might be written dealing with the natural resources of the United States and their effect on our mentality and behavior. Now that these resources have been somewhat diminished it does not follow that our interests and habits as husbandmen need necessarily fall to an even lower level. Our great hope, in fact, is that the process may work inversely; that now, as we see ourselves plainly threatened in our national security, we shall become more quickly husbandmen worthy of the name. This very change has been set in motion rather rapidly during the past decade. Those of us who are in agricultural work, and who see all that must be done in a hurry in the face of recurring emergencies, domestic and foreign, are too often inclined to become discouraged. So much to do, so little done, and time fleeting; we compare our developing programs with the modest accomplishments so far, and almost despair. And yet looking back even six or seven years ago, and comparing our Department of Agriculture as it was then with what it is now; or our agricultural colleges and experiment stations then and now; or our Extension services, then and now, there is little reason for discouragement. Considering the new set-ups at Washington and the State colleges, the new peace-time army of adjustment and groundline conservation afield -- the farmers' planning councils, the soil conservation districts, the 125,000 farmer committeemen, operating over this country as a whole, peacefully, democratically, constructively -- we may be far from discouraged. Six years ago, we had no such organization afield; and we had barely the beginnings of the information and guidance necessary for the



conduct of a real action program of conservation, nationwide. We have made good progress; but we have just begun.

In their recent book, VANISHING LANDS, two English scientists, Whyte and Jacks, made a point which seems most interesting. Surveying the ravages of accelerated or man-made soil erosion throughout the world, they report that of all the continents, Africa has the worst case of it, with our own continent, North America, second-worst. Being Britishers, these authors are naturally much interested in Africa, and in possible stays against the catastrophic degradation of soil and man over there. They find little hope of a general solution. Only limited repair is possible, as they see it, over Africa as a whole. The mixed population, lack of concord between black states and white colonists, and the low degree of native education, all combine to make impossible or ineffective in Africa the necessary unified and co-ordinated counter-attack that we have initiated on an ocean-to-ocean scale, here in the United States.

The United States leads the world in this particular, these Englishmen say. We have still a wealth of resources worth preserving, and a growing determination to conserve them. We have a high degree of general education and intelligence; and, most important of all, we have devised and set into action, through Federal and State cooperation, new forms of social machinery to do the job. It may take quite a while, these Englishmen indicate, but they believe that the people of the United States, acting together, mending their ways together, will go up, not down, in this war with nature.



The most hopeful thing in our present situation, is that we have already in some part reformed our pioneer way of looking at our land as a source to be taken and plundered; we have organized new social vehicles, and have set upon a march toward putting our lands in order. Next to that, we may take comfort in the fact that while we have done great harm to this country in many places, it is still a marvellously favored land, richly endowed with natural wealth, beauty and vigor; and, as compared with most other civilized lands, rather happily situated, at the moment.

With the world as it is today, with the lines of intercommunication of civilized man so tightly drawn, and tense, it would be a smug people, indeed, who would consider three thousand miles of water on one side and some five thousand miles of water on the other, a complete and perfect insulation against the wars and sufferings of older lands. The destruction and the anguish overseas cannot fail to affect us here, both while the fighting proceeds, and again after it is over. We have already had to make sweeping adjustments in our agricultural and industrial thinking and action, as a result of conditions brought to a pitch during the last World War. It is likely that we shall have to go on making even more troublesome interior adjustments. Our chief anxiety is that, this time, we shall have more nearly agreed on a common goal to march toward -- an American goal, with our line of march set for years ahead -- and not be so blindly pushed by the play of world circumstances as to try, as we often have in past years, to gaze one way and march the other.







In soberly calculating new American aims and routes of march it is not mere smugness, however, but the part of wisdom, to think somewhat in terms of time and distance. We should take into our calculations a relatively isolated position, physically remote, for the while at least, from the 'fronts' of passion and carnage which threaten to demolish democracy and the freedom of the individual man. How much time have we to put our own lands and lives in better order, to defend them against our own mistakes and brutalities, to rear a truly American standard of civilization here at home, before we, too, may be forced to act against possible outside aggression?

No one knows. Pray God that may never happen. But we must start to conserve and defend that which we have here in America which is precious beyond price, unique in the history of lands and man; and we should start now. We have been great wasters and spenders; now we must change our ways, and make this land great and rich and beautiful from the groundline up. We have already been too long a while getting started.

Here in the United States we have a 'chosen land,' a land in which because of abundant national resources and less pressure either of internal population or of surrounding populous nations, mankind is less compelled to travel in specific channels by hard material fact than in the case of any place else in the world.

To many of you this will be a familiar theme. Many of you have taken occasion to say pretty much the same thing in the past. America may not care to choose; but America, amid increasing world unrest and upheaval, has still the freedom to choose its own way of life, its own future, far more so



than any other great world power. Nowadays in talking with people and in reading the findings of public opinion polls we find that most Americans have no heart for war; they abhor the idea of our becoming embroiled in Old World conflicts. Nearly nine out of ten Americans, it is estimated, want no part in the wars of Europe or Asia; yet nearly as many feel, and say, that they think in the end we will somehow or other be dragged in. This curiously fatalistic line of thinking does not seem typically American; we may hope that it will moderate and change. It still seems to me that, with a united will, and with a course of action upon which we can agree constructively, we Americans need be no mere puppet of foreign war lords; Americans can choose. We still have a free choice between a number of ideas; and it is a matter of tremendous significance to the future of the world which sets of ideas we embrace.

What we need first of all is a set of ideas that will command our allegiance over and above partisan, class, and regional consideration, a campaign of peaceful conquest within our own borders, a line of march along which we can all move confidently, shoulder to shoulder, to enrich and preserve our land. The times are ripe for such a reconquest of America; the spirit is abroad; the forces of reconstruction are afield. And if we can find something at home which all men agree is worth fighting for, the greater, I feel, are our chances to mend our lands and fortunes without resource to guns and banners, without hatred, without abandoning democratic forms of reason and guidance, without another world-wide tempest of human waste and slaughter, and perhaps without another grinding slow avalanche extending all these processes -- another great world-wide post-war collapse.





## B. WORD PICTURE OF SOIL DESTRUCTION

### I. IN THE OLD WORLD

We must formulate a new working philosophy of American land husbandry, one which emphasizes not only the security of the soil itself as our basic resource, but the ultimate security of all who live on this soil, now, and for all the generations to come. Soil decadence, such as may now be seen on many once-powerful lands on this earth, and over a depressingly large part of our <sup>own</sup> country, is inevitably followed by social and political decadence. We must guard and restore American soil as our great basic source of all production, and as a place of permanent and settled abode.

In terms of fundamental agricultural aspirations still alive and vibrant, with a clear lesson still to tell us in terms of our national life and prospects of racial survival, the greatest book ever written is the Holy Bible. No wonder that country people in general love this book, and revere it as The Book, more than city people do. For it is a country people's book, written by plain country people in plain country terms, almost entirely. All the farm troubles that we know today are in it, and all the delights and compensations of farming. No wonder country people, especially, throughout so much of the world, carry in their minds and hearts, word for word, by verse and chapter, so much of the ageless poetry, the household proverbs, and the rather bitter history of the driven, early Jews. It must be much harder now, even in Germany, to whip up a mean and narrow hatred of the Jews among the people of the open country there than it is in the more hectic and artificial environment of the larger cities and towns.





The authors of the Bible speak as countrymen to countrymen in terms eternally clear and appealing. What modern writer in any country has so well put in words the final aim and intent of what, here in the United States, we have begun to call our Farm Security program? -- "But they shall sit every man under his vine and under his fig tree; and none shall make them afraid."

But it is not only on the side of poetry and religion that the Bible has meant for our minds. It is a pity that so many scientists -- soils men, botanists, biologists, economists, sociologists, anthropologists, ecologists and whatnot -- have been scared so far away from the Bible by the meanly pious, and the goody-goody type of Sunday School teacher, in their youth. Many of them, if they will go back to it without prejudice and read it simply as a book, will find it stimulating.

It seems that during part of the period during which the Old Testament was composed and gathered together, the round limestone hills of Palestine were guarded with forests. Genesis, Exodus, Chronicles and Kings, all mention this. But by the time we come along to Second Kings it appears that many "groves" in high places had been cut down. This was probably due in part to population pressures, and partly to the feeling that such groves harbored pagans of an alien faith.

No thoughtful person reading these early chapters in the history of the Holy Land can fail to detect that a rampageous pioneer, or promoter, spirit was pushing those people into dangerous excesses of unwise land use. When the children of Joseph complained of a cramped feeling, Joshua told them to get out and cut themselves out more bared land to surge upon. These were his words:



"If thou be a great people then get thee up to the wood country, and cut down for thyself there in the land of the Perizzites and of the giants, if Mount Ephraim be too narrow for thee."

In Numbers, as Dean Walster of the North Dakota Agricultural College and other observers of the current western scene have noted, the pioneer spirit is evident. We read that "Moses sent them to spy out the land of Canaan" and "They returned after forty days and they told him: Surely it floweth with milk and honey; nevertheless the people be strong and the cities are walled." Then up speaks Cabel, the promoter, saying, "Let us go up at once and possess it, for we are well able to overcome it."

George Perkins Marsh, who studied the situation about the time of our Civil War, concluded that the Holy Land was once well timbered, but that the crests, and later the hill sides were denuded. He points out that the Old Testament abounds in references to woodland, whereas the only trees mentioned in the New Testament are orchard trees. There can be no doubt that the people of the Bible land suffered from soil erosion and the derangement of natural water systems, and that they were conscious of their trouble. Ezekiel warns against overgrazing, Isaiah warns against cultivating hill land, and pictures the consequences of mismanaging water. "They shall turn the rivers far away," he writes, "the brooks of defense shall be emptied and dried up; and everything sown by the brooks shall wither."

But the most eloquent writer on soil erosion was Job, who writes that, "The waters wear the stones: thou wastest away the things which grow out of the dust of the earth; and thou destroyest the hope of man. Drought and heat consume the snow waters: so doth the grave those which





have sinned." And then: "If my land cry against me, or that the furrows likewise thereof complain, -- let thistles grow instead of wheat, and cockle instead of barley."

"If my land cry against me...." There is a warning in that for us, today. Our land does cry out against us over vast areas, asking care, demanding to be healed and better tended. Other great nations have been given the same warning, and have not heeded it in time. Dr. Walter Lowdermilk, who is making a study of erosion in old lands, has written recently that "We have found soil wastage by erosion far more widespread and serious than we had expected. We had to be escorted by armored cars in Palestine, but were able to go ahead and make our studies, thanks to the generous cooperation of the Government....Our contemplation of man's use of the land through the ages....makes me think that we need an Eleventh Commandment to regulate man's relation and responsibility to Mother Earth...."

"If Moses had anticipated what we have seen in North China, Korea, North Africa, Mesopotamia and Asia Minor....namely, the wastage of land due to man's practices of suicidal agriculture and the resulting man-made deserts -- if he had foreseen the impoverishment, revolutions and social decadence of billions of people through thousands of years, he doubtless would have been moved to deliver such an Eleventh Commandment as would complete the trinity of man's responsibilities to his Creator, to his fellow man and to Earth...."





## II. SOIL MISUSE IN THE UNITED STATES

In the humid parts of the country, the worst problem areas from the standpoint of present human misery are probably in cut-over forest regions and in the hill regions of the East and South. In the cut-over forest regions there is much land unfit for farming, and human effort and public funds are both wasted when attempts are made to farm it. Frequently, settlement is sparse, sometimes consisting of stranded populations left when milling or mining operations stopped. Roads and schools -- even poor schools -- cost more than they are worth for so few people, and much more than the people can pay; the rest of the State has to foot the bill. Such lands would be more profitable if they were devoted to their best use, which is forest production.

In the hill regions of the Northeast, the farm population was declining in most areas prior to 1930 as farms were abandoned. In most counties in the Southeast, it has been increasing; some hilly areas of poor soils have a density of population greater than the most productive parts of the Corn Belt. The population has backed up here because neither old nor young could find opportunities to leave; and during the depression there was an actual net migration into some of these areas. Many people eke out a bare subsistence from the land. The productivity of the soil is reduced at an increasingly rapid rate as erosion proceeds.

In the subhumid and arid regions lie the dry-farming areas, the irrigation projects, and the range country. There are relatively prosperous communities in the dry-farming areas -- but there is also the Dust Bowl. A great many farms, even though large by eastern standards, are too small to furnish a livelihood under the prevailing conditions. Human optimism,



local pride, commercial interests, the war, and large-scale farming machinery have all played a part in the overdevelopment of some of these communities. In years of high rainfall, production is good and everything booms; then come years of low rainfall, bringing crop failures and widespread ruin. Families by the thousands have migrated in bad years, many of those who remained have had to go on relief, loans could not be repaid, and there is widespread tax delinquency. Wind erosion resulting from plowing up the original sod is serious nearly everywhere/except in the eastern part of the region.

Where there have been failures and misuse of the soil on irrigation projects, they have often been due to mistaken judgment or lack of knowledge at the time the project was developed. Irrigation projects in general, according to one study, were in better financial condition during the depression than agriculture as a whole. But when failure does occur it hits hard because of the high cost of irrigated farming.

On range land in the West, both public and private, the heritage of fertile soil has been quite generally squandered by overstocking and grazing at the wrong season. Where the range is damaged by overgrazing, drought takes a heavy toll. Erosion also becomes serious, and flood damage increases. The profits from livestock are reduced, farm living standards are lowered, and homes are abandoned. On the other hand, good management on numerous private ranges and in the national forests proves that this waste of land and people is not necessary.

Much land has been put under cultivation that should never have been used or should have been used differently. Unwise drainage is another example of this. Drainage has been extremely worth while in many cases, but it has also sometimes been a waste of money, especially where the soil



was basically unsuited to agricultural production. The State of Minnesota, for example, has had to spend millions of dollars aiding distressed drainage districts established in what were originally swamp areas. In addition, the peaty soil was subject to disastrous fires when drainage had dried it out. Such waste can easily be avoided by leaving unsuitable land in its natural state, developing it as refuges for wildlife, and impounding water instead of draining it away. This is now being done by many States in cooperation with the Bureau of Biological Survey.

These are instances of soil misuse in particular regions and areas. What about soil erosion in the country as a whole? How extensive is it? What are its effects?

An erosion reconnaissance survey of all the land in the United States, agricultural and nonagricultural -- something over 1,900,000,000 acres -- was made in 1934. A reconnaissance survey is not detailed or precise, but it is useful nevertheless. Among the facts brought out by this survey were these:

- (1) On 37 percent -- 700,500,000 acres -- of the total land area, mostly flat, gently undulating, or forested, erosion has been slight; less than one-fourth of the original surface soil has been lost.
- (2) On 41 percent -- 775,600,000 acres -- erosion has been moderate; from one-fourth to three-fourths of the original surface soil has been lost.
- (3) On 12 percent -- 225,000,000 acres -- erosion has been severe; more than three-fourths of the original surface soil has been lost.







(4) Three percent -- 57,200,000 acres -- of the land area has by now been essentially destroyed for tillage.

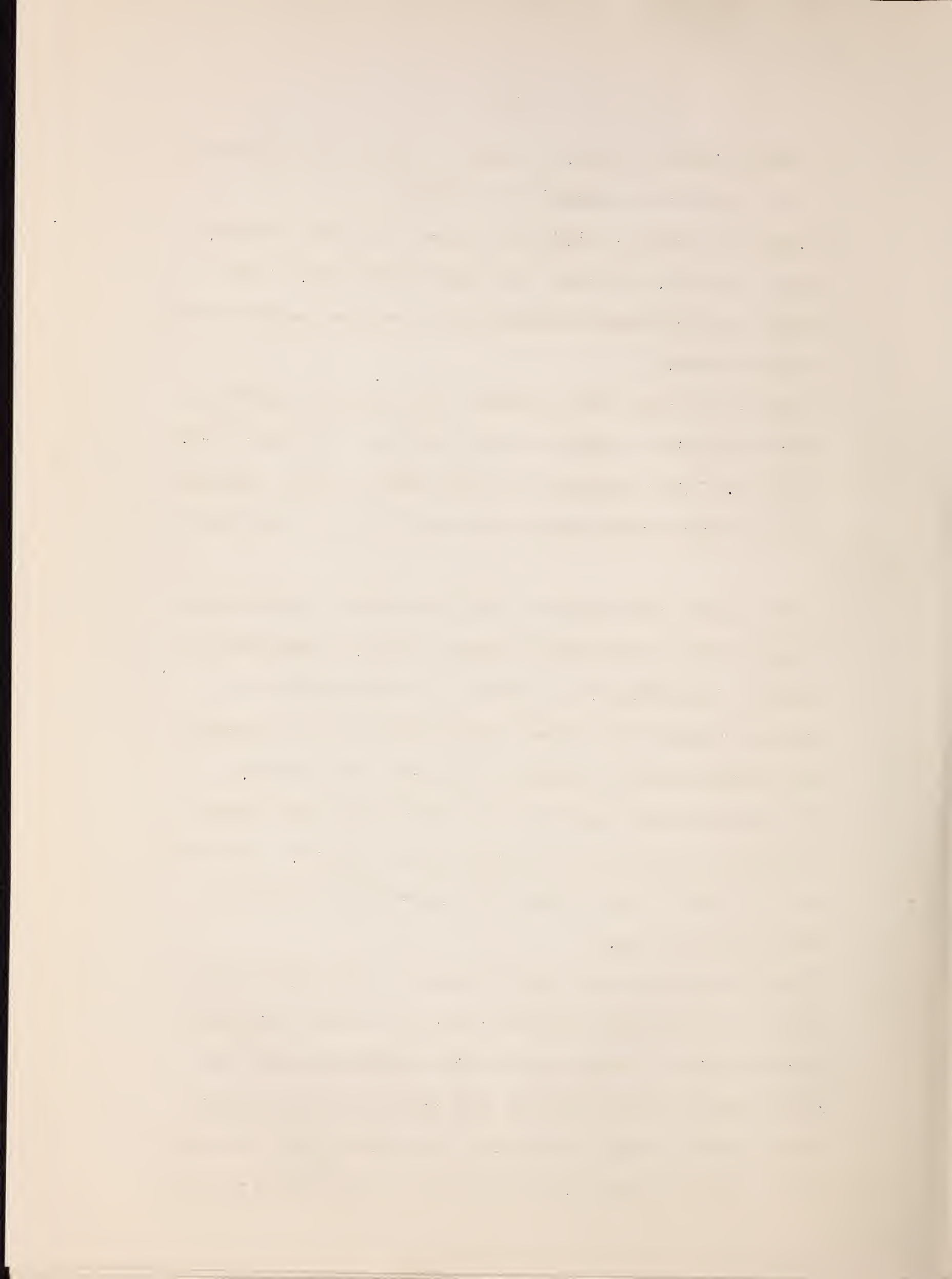
(5) About  $7\frac{1}{2}$  percent -- 144,700,000 acres -- consists of mesas, canyons, scablands, badlands, and rough mountain land. Overgrazing and other abuses on some of this land have caused moderate to severe erosion.

So much for the land area as a whole. In 1937 State and Federal workers made a Nation-wide appraisal of the condition and needs of agricultural land only. This resulted in the following estimates, assuming a price level for agricultural commodities equal to that in the period 1921-36:

(1) The present cropland area of the United States (1935 Census of Agriculture) is 415,334,931 acres. Of this, practically 61 percent -- about 253,000,000 acres -- is either subject to continued erosion or is of such poor quality as not to return a satisfactory income to farmers at the price levels assumed.

To continue present practices on the part of this land subject to erosion is to mine it and progressively destroy it. Over half of it is badly in need of good soil conservation practices to prevent serious damage.

(2) It follows that only about 39 percent -- some 161,000,000 acres -- of the present cropland area can be safely cultivated under prevailing practices or should be cultivated under the price levels assumed. But some land that is not now in cultivation could be safely cultivated. Adding this to the 39 percent gives a total of about 211,800,000 acres as the maximum that can



be safely cultivated under prevailing practices. This is equivalent to a little less than half of the present cropland area. Under prevailing practices, then, our agricultural plant would have to be reduced by half if we wanted to save the soil.

(3) But agricultural practices change; and under the best practices, fully 82 percent -- 339,000,000 acres -- of the present cropland area can be safely cultivated and should yield a satisfactory return at the price levels assumed. Even under these practices, however, over 76,000,000 acres -- 18 percent of the present cropland area -- should be retired as submarginal or not suited for production at present.

(4) But if the need arose, we could more than make up for this retired submarginal land, because with the best practices we could cultivate some 108,400,000 acres that are now in plowable pasture, brush, or timber, or are improvable by drainage or irrigation. This might be called the Nation's production reserve. It brings the potential resources of cultivable land, under the best practices, up to 447,466,000 acres, which is a little more than the cropland area of today.



### C. HUMAN IMPLICATIONS

Damage to the land is important principally because it damages the lives of people. The whole purpose of conservation goes back to that fact. Saving soil is not an end in itself; it is only a means to the end of better living and greater security for men and women. In conserving land resources, the real aim is simply to protect human resources from the adverse effects of land decline.

These adverse effects reach into many phases of human life and activity. The relationship between land and men is very close. Wasted land means less opportunity, less independence, less security, for people. It means a lower standard of living, since land is the basic source of agricultural wealth. Many factors exert an influence on farm income — prices, markets, initiative and competence, the weather — but one thing seems certain: the best farmer, with perfect weather, high prices, and wide markets cannot produce crops from sterile, unproductive land. Even where land is good, erosion cuts heavily into its capacity to produce and, as productivity is sapped, necessary increases in the costs of production reduce the net return. To the extent that the area of declining land increases under the drain of soil erosion, the problem of stabilizing farm income and relieving rural poverty will be magnified.





In its effect upon the lives of people, however, land decline has consequences much more immediate than the impairment of income. Directly, soil erosion is a cause of floods and dust storms, with all of their implications of human suffering and economic cost. It is a cause of direct damage to reservoirs, highways, railroads, irrigation works, and similar facilities which represent a social necessity and involve an economic investment on the part of society. The impairment of these facilities by the deposition of silt, by washouts, and similar damage has an immediate adverse economic effect upon the people whose taxes build and maintain them and whose livelihood may depend upon the availability of irrigation water, market roads, and so on.

Indirectly, the consequences of land depreciation are even more far reaching. The steady drain of soil erosion is a contributing cause of tax delinquency, the disintegration of rural communities, migration of rural populations, rural poverty and large relief rolls, lowered living standards, instability of rural income, stranded populations, absentee ownership, tenancy evils, and similar problems of an economic and social nature.

Back of the silting of a reservoir, for example, is a chain of circumstances directly affecting the purses and the daily lives of many people. The silt itself, produced by the erosion of upland fields, is a symptom of dwindling land productivity. That means



lowered yields per acre and decreased income for the farmer, or higher expenditures for fertilizer and for operating machinery over gullied fields. In the reservoir, the silt displaces water needed for power and perhaps for irrigation. Power rates may be forced upward in the community served by the dam; irrigation water charges may be increased as the supply becomes scarcer. Conservation of the soil in the watershed feeding the reservoir would have preserved the productivity of the farmer's fields, helped him to maintain an economic return on his investment; it would have safeguarded the people of the community from increased power and water rates and protected their investment in a community social facility.

Tax delinquency in rural areas is due, of course, to a number of circumstances -- low prices for farm products, crop failure, heavy mortgage indebtedness, land abandonment, and so on. But studies in a number of localities seem to indicate a direct relationship between tax delinquency and soil erosion. In the western half of Baca County, Colorado, the heart of the Dust Bowl, for example, thirty-five percent of the land was tax delinquent at the beginning of 1938, largely as the result of wind erosion which forced abandonment. As more and more land becomes delinquent, the tax burden frequently is shifted to good land in order to meet community costs for the maintenance of schools, roads, and other social facilities. Community

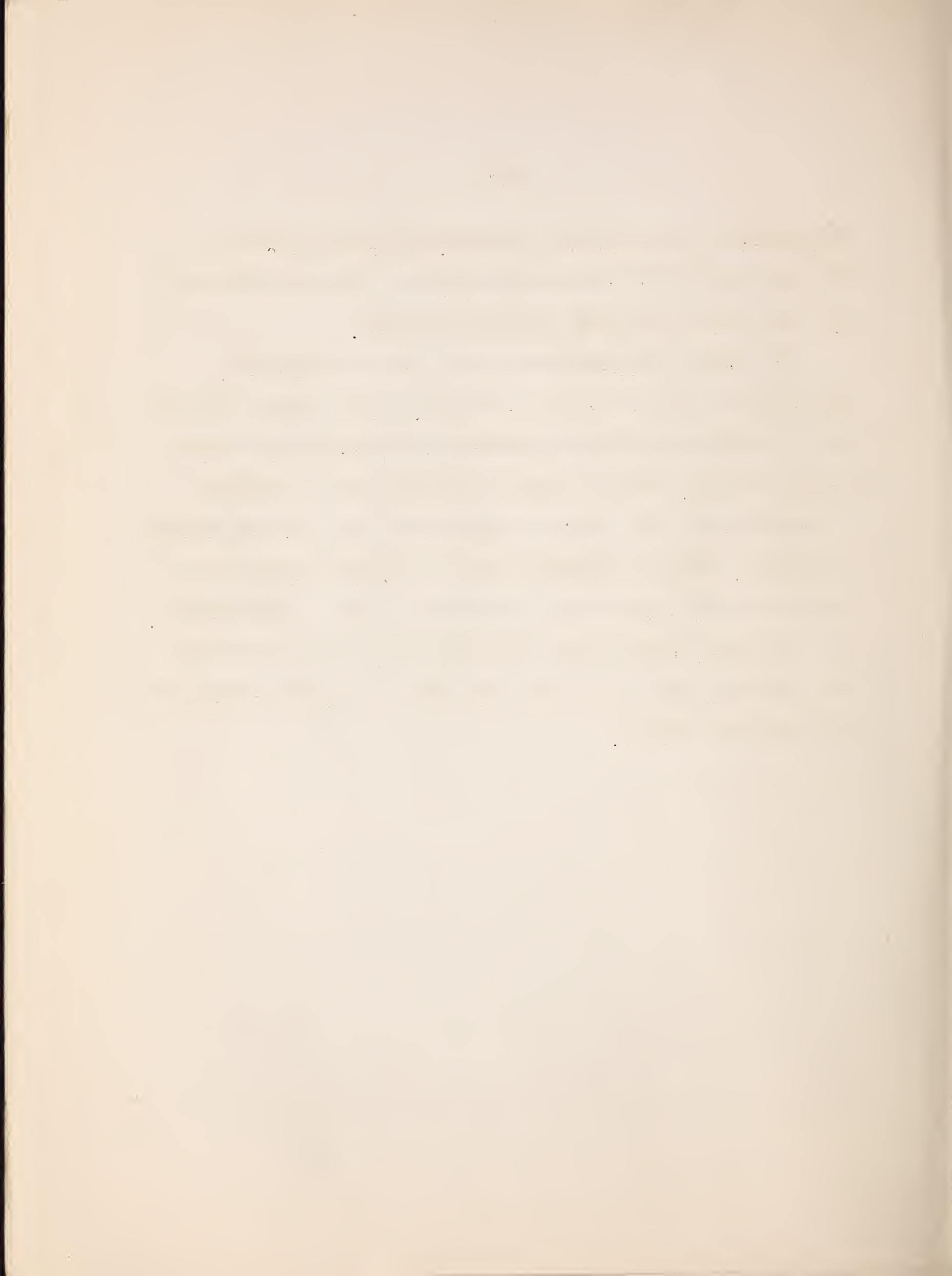




disintegration is the ultimate consequence where land declines to the point at which it will no longer provide a living for individuals or a sound base of community wealth and commerce.

The chain of circumstances set in motion by progressive depreciation of the land is almost endless. Lowered living standards lead to problems of health and sanitation; malnutrition is a symptom of rural poverty. Lowered community stability leads to problems of education; poor land will not support schools and pay the salaries of teachers. Lowered productivity tends to prolong tenancy since a man cannot get far enough ahead economically to buy ownership status.

The human implications of the land problem have not yet been fully explored. There is room here for extensive research and analysis into causes and effects.



#### D. PROBABLE EFFECTS OF WAR ON AGRICULTURE

The new hostilities remind us with new emphasis that world conditions affect our agriculture vitally and that the problem of achieving an ultimately satisfactory farm adjustment is more difficult than ever. Agriculture can do nothing without reference to this basic fact.

It would of course be folly to regard the new war as in any way a solution of our farm problem. Even should it cause certain prices to rise, so that differentials may for a time not be necessary between prices at home and prices abroad, the need for protecting the home market against the influence of the world market will return with the return of peace. Whether or not the pattern of the last war and the post-war period will be repeated we do not know; but we do know that war usually destroys or reduces the purchasing power of belligerent countries.

Hence the outbreak of hostilities is not a reason for abandoning our efforts to conserve the soil, to keep our farm output in adjustment with the current and prospective demand, and to establish a rural-urban balance on the basis of equitable price relationships. On the contrary, it is a reason for strengthening our machinery to accomplish these ends. Such machinery has already demonstrated its usefulness as a means of adjustment to war conditions. After the war, if drastic farm adjustment must again be made, it will be a safeguard against market demoralization.





This machinery enables farmers to meet the shock of war much better than they met it 25 years ago. It authorizes two main responses to the foreign trade problem: (1) The adjustment of production more nearly to the combined foreign and domestic demand; and (2) the raising of domestic agricultural prices above world prices when world prices are depressed, or equivalent action in raising the income of farmers from the domestically consumed part of their production. Methods used to adjust farm production downward can be used to adjust it upward should need arise. Methods developed to protect domestic prices and to provide more income from the domestically consumed than from the export proportion of the farm output may be necessary for some crops during the war, and for many crops when the war ends. There is no justification whatever for allowing the adjustment machinery to lapse.

Even should we have an improved demand for wheat and cotton and other export crops, we would need cooperative land use planning. Reckless expansion without regard to the needs of the soil would be eventually disastrous. It would lead to heavy overproduction and would undo the work of years in soil conservation. Land that should not be farmed would stay in or come into cultivation; there would be a new plow-up of the grasslands, with new hazards of dust storms. In the South, if the cotton acreage increased, crop diversification would lag; expansion in the feed grain areas would hinder the shift from soil-depleting to soil-conserving crops. Our stocks of cotton,





wheat, tobacco, and feed grains are large. If more should be required, the farmers through controlled expansion can satisfy and yet not go beyond the extra need. Lack of such facilities might mean heavy overplanting.

Farm incomes are still below parity; farmers are in debt, and behind with farm and home improvements. On a purely competitive basis the average farmer would feel that he could not afford to sacrifice his immediate cash interest for the long-time welfare of the Nation's resources, or even for the long-time welfare of his own farm. He would be strongly tempted to repeat the soil exploitation of the World War period, which laid the basis for the disastrous dust storms and floods of recent years. Only cooperative action supported by Government powers and Government funds, could prevent the same exploitation from occurring if the same price incentives were present.

Of course no one can predict the duration of the war. Agriculture in the United States should be prepared for either a short or a long struggle. In the event of an early peace, our export opportunity probably will not be better than it was previously, since even a short war will involve great expense to Europe. Meantime, the stimulus to prices may be slight. In the event of a long war, prices will probably be higher for a longer time, but if the pattern of the last post-war period is any criterion, the resulting depression will be deeper. In either case the need will probably be paramount for farmers to be in a position to guide their production intelligently



and to protect themselves and the Nation against undue speculative expansion.

The need will continue to protect the social interest in land use planning. There can be no truce whatever in the fight against misdirected land settlement, wrong use of land resources, wastage of soil and water, and bad land-tenure conditions.

Whatever the political outcome, the economic effects of the war will be bad. There is grave danger that it will further dislocate our agriculture. Any temporary rise in prices it may cause will be likely, even with continued acreage adjustment, to bring about an excessive response. That is the way things always go. Farmers who participate in the ever-normal-granary, crop-adjustment, and conservation programs will constitute a stabilizing influence; but rising prices may increase the number of nonparticipants. Even on the adjusted acres, production may rise through increased intensity of cultivation. Prudence demands not less but more cooperative land use planning, as a counterweight to the usual tendency of supply to overshoot demand. There should be no great difficulty in satisfying whatever actual increased demand may develop. There may be extreme difficulty in avoiding the ultimate accumulation of heavy surpluses. Our best course is to keep our crop-adjustment system in flexible, yet effective operation.

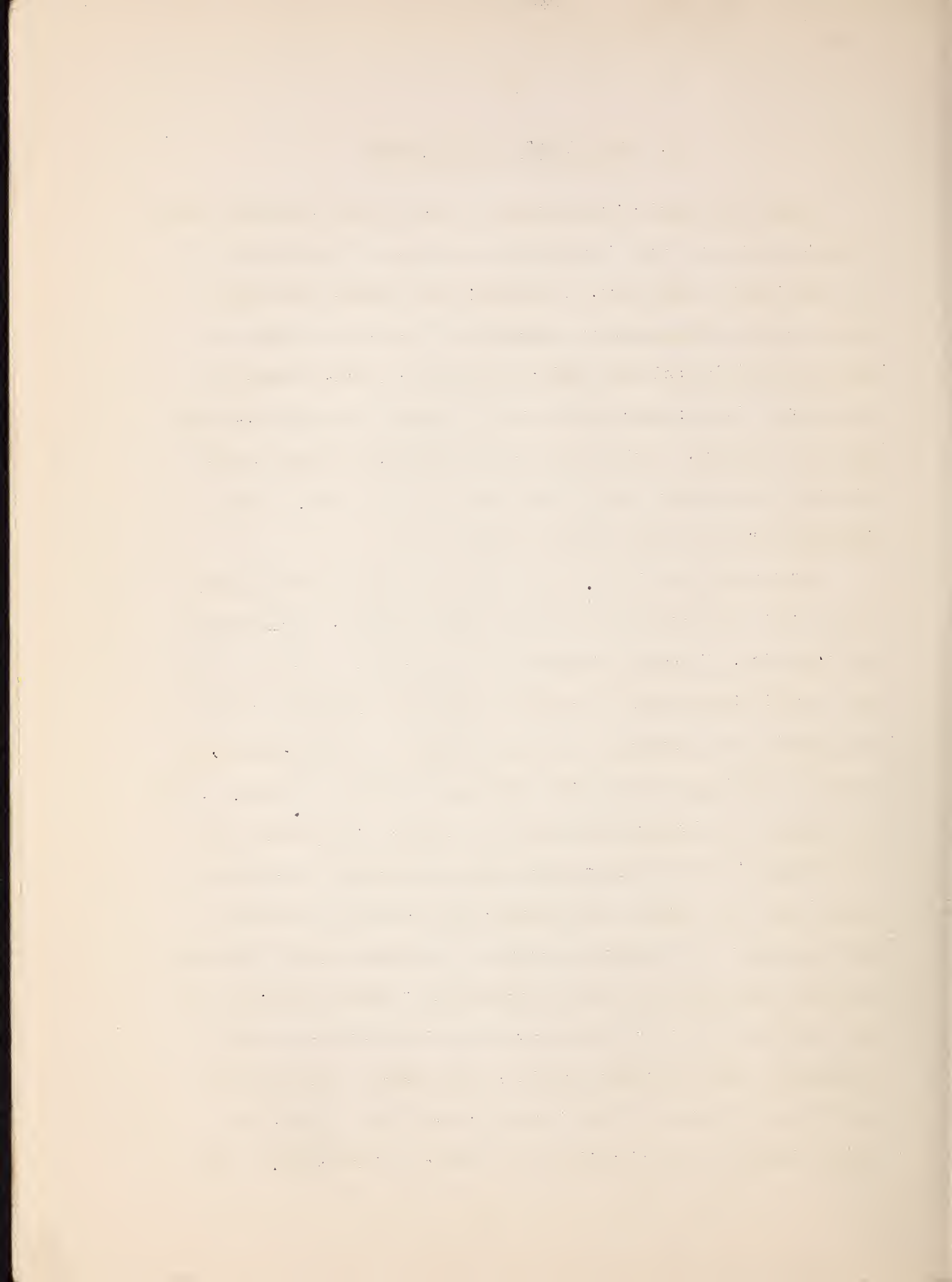




### E. SOME CAUSES OF SOIL MISUSE

Among the causes of this misuse of the soil and consequent waste of human resources, lack of knowledge on the part of individuals undoubtedly plays a large part. But even if all farmers thoroughly understood the consequences to themselves of the type of land use they are practicing and had perfect knowledge of soil-conservation techniques, a large number would still be unable to put the knowledge fully into practice. Social and economic limitations would prevent them from doing certain things they knew ought to be done. These limitations are themselves causes of soil misuse.

First among them is our traditional attitude toward the land. In the past this country has not had a comprehensive or well-thought-out land policy. We had an abundance of resources and a strong tendency toward individualism. We believed that every man had a right to the unrestricted ownership of a piece of earth. Our land policy consisted in disposing of the public domain as speedily as possible. This was natural; the primary need then was to subdue a wilderness. But in following out this policy, we sometimes frustrated our own fundamental aims. For example, corporations and speculators acquired large acreages, and thousands of acres of the finest forest land were secured by exploiters and promptly devastated. Without guidance, some settlers took up poor land, and on the Great Plains the homestead grants were not large enough for a livelihood. Land speculation eventually tended to favor absentee owners and to make many farmers regard the land primarily as a source of quick profit. The



prevailing system of inheritance worked toward the breaking up of farms into too small units in some areas; in others it encouraged tenancy and the passing of ownership to people who had moved off the farm.

Present methods of granting public aid to distressed rural areas would help to perpetuate evils if no effort were made to find and correct the causes that make aid necessary. This is true of direct relief, work relief, drought relief, crop loans, feed and seed loans, rural rehabilitation loans, Agricultural Adjustment Administration benefits in some cases, and State aids to communities too poor to pay for public services. The danger lies in continuing emergency measures indefinitely and thereby covering up the conditions that necessitate them.

#### I. DEFECTS IN FARMING SYSTEMS

Some farming systems are inherently soil conserving; others are not unless special practices are followed. Moreover, this country is so diverse in soil, climate, and other ways that it can be divided into at least 500 type-of-farming areas. In each type of farming there are certain most-favorable combinations of soil, slope, climate, use of labor-power and equipment, and managerial ability. Departure from the optimum at any of these points lessens opportunities for income, economical operation, and soil conservation. This is especially true where attempts are made to follow a system of farming not suited to the region, and also in the case of the small-farm operator who has to





use his land to the limit. If a farmer is to make enough to live on without punishing the soil, the first requisite is that he have adequate soil and water resources.

## II. TENANCY

Three facts stand out as of major significance in connection with tenancy. (1) It has grown with great rapidity; the number of tenant-operated farms increased from 1,024,601 in 1880 to 2,865,155 in 1935, and from 25.6 percent of all farms to 42.1 percent. (2) Tenant farms ordinarily have a larger proportion of land in soil-depleting cash crops and a smaller proportion in soil-conserving crops than owner-operated farms; this is proved by several studies. (3) It is not tenancy itself that discourages soil conservation but the prevailing conditions under which tenants have to operate. Farms are ordinarily rented for a year at a time without assurance of renewal. The tenant is here today, he has gone tomorrow, not always because he wants to but because the tenancy system too often works that way. Under these conditions he must produce cash crops, and what happens to the soil is not his concern. If he makes permanent improvements he is not compensated for them; in fact he is likely to lose the place to a higher bidder. The net result of the system has been to make neither tenant nor owner responsible for good soil management.

## III. CREDIT AND FINANCE

Certain imperfections in agricultural finance, notably in mortgages and taxation, have also tended to discourage soil conservation.





The necessity of meeting payments on a mortgage that is unduly burdensome has caused many farmers to push the production of cash crops to the limit and to avoid any expense for soil-conserving practices. Most mortgages contain no provisions for preserving soil fertility; their terms are a heritage from the days when this was not considered necessary. Until a few years ago, rising land values were taken for granted and an increasing mortgage debt caused little concern. But as the long decline that began in 1920 got more and more farmers into serious trouble, the shortcomings of the prevailing finance methods were widely recognized.

In 1935, 42 percent of all owner-occupied farms and about 25 percent of all rented farms were mortgaged. Obviously, mortgage terms may have a widespread influence. There are four ways in particular in which they may encourage soil depletion, increase tenancy by causing owners to lose their farms, and discourage tenants from becoming owners: (1) Too heavy a debt, based on too high land values, which is disastrous when prices decline; (2) the short-term straight mortgage, which is difficult to refinance during periods of economic stringency; (3) too high interest rates, which result in charges greater than the rate that can be earned by the farm; and (4) too low interest rates, when they are capitalized in too high land values.

#### IV. THE PROPERTY TAX

The property tax also aggravates the tendency toward exploiting land resources. In contrast with urban enterprise, farming depends



on a relatively large investment in land. Thus the property tax, which is primarily on real estate, tends to have a greater effect in intensifying the financial difficulties of farmers and those engaged in timber enterprises

Partly, this effect arises from the nature of the property tax itself. It is based on value and does not fluctuate with income, which makes it bear especially hard on farmers during lengthy periods of low income, and on forest owners during the time when young or cut-over timberlands need to be built up. Partly also, the effect is due to faulty administration. For example, studies show that there are great inequalities in property-tax assessments and an almost universal tendency to overvalue land that brings a low price per acre. There are also many overlapping jurisdictions in local tax administration. All of these factors have a generally adverse effect on permanent soil maintenance by increasing taxes, particularly on the poorer lands, and making it necessary to turn as much land as possible to uses that will produce ready cash for tax payments.

#### V. OTHER CAUSES

In addition to the causes of soil misuse discussed so far, there are others that lead to the same result less directly. These include instability of production, prices, and income in agriculture; the fluctuations and inequalities in the general economy; and the lack of balance between industry and agriculture.





Instability in agriculture itself includes most aspects of the farm business. There are wide fluctuations in the acreage planted to individual crops as farmers try to adjust themselves to changing economic conditions; in yields per acre, according to weather conditions; in storage stocks; in domestic and foreign demand for farm products. Cyclical fluctuations in certain branches of agriculture—notably cotton, wheat, pork, dairy, and beef production—have been growing more violent in recent years. From the standpoint of soil use, these fluctuations, on the one hand, are responsible for opening up large areas to speculative farming during periods of temporary prosperity; on the other, they restrict the amount of money the farmer has available for long-time improvements during periods of hardship.



## F. WE ARE READY TO APPLY THE REMEDIES

Ours is a nation most favorably situated and best prepared to apply remedies to the causes of soil misuse. We are, perhaps, the best informed people in the world. We are susceptible to new ideas, and we welcome new and better ways of doing things. We are not so bound in tradition that we cannot remedy our faults once we recognize them. We are not so steeped in ignorance that knowledge of our faults cannot be communicated to us; and our facilities for communication among ourselves are unexcelled. Our body of land of almost 2 billion acres is blessed with the widest range of resources. What other nations fight for, we have. We have fashioned many of the instruments necessary to cooperative planning and cooperative action in order that we may not further waste what we have.

### I. At the national level we have:

1. The Agricultural Adjustment Administration, which helps the farmer meet the costs of shifting from an exploitative system of agriculture to a conservation system.

2. The Soil Conservation Service, which provides technical assistance to farmers who need help in making physical adjustments in soil and crop management, and helps farmers with farm forestry and water facilities development; engages in submarginal land purchase and development.



3. The Farm Security Administration, which, through supervised loans, helps disadvantaged farmers solve problems of subsistence, insecurity of tenure, and farm management.

4. The Forest Service, which manages the national forests for conservation purposes, watershed protection, and public enjoyment; and offers guidance to private owners of forests.

5. The Taylor Grazing Administration, which governs grazing on the public grasslands.

6. The Bureau of Biological Survey, which establishes refuges for wildlife.

7. Research bureaus and a body of knowledge to provide the basis for intelligent action.

II. At the State level we have:

1. An awakened interest in conservation and the need for readjustment in land use that has resulted in

a. Passage of soil conservation district laws in 36 States. (173 districts have been set up in 25 States; Department is now cooperating with 146 districts according to terms outlined in memoranda of understanding; 108,000,000 acres in districts.)

b. Rural zoning laws in an ever-growing number of States.

c. Revision of tax laws to provide incentives to wiser use of land.

d. Revision of water laws to bring use of water into conformity with wise use of land.





e. A law in one or two States defining tenant and landlord rights.

f. Laws authorizing formation of grazing associations under State charters.

2. State colleges of agriculture with a developing conservation philosophy.

3. Agricultural extension services reaching into practically every agricultural county in the United States.

4. State Agricultural and Forestry Departments.

III. A land use planning structure reaching from the farms to Washington.

45 States are taking part in a cooperative land use planning project.

Local land-use planning committees are now at work in nearly all counties in these 45 States. Within less than a year after the Mt. Weather agreement, preparatory work had been begun in 830 counties, and intensive work in about 450 counties. An equal number is expected to begin intensive work in 1939-40. In at least one county in each State, a unified program of action, based on community and county plans prepared locally, will be undertaken in 1940. By 1941, unified programs of action are expected to be underway in the 450 counties now engaged intensively in planning. It is intended eventually to carry on unified programs of action in all counties.

IV. We have personnel trained to provide technical leadership

1. In the field of research - State experiment stations, federal research bureaus.



2. In the field of education -- 8500 extension workers, several thousand vocational agriculture instructors, colleges of agriculture, etc.

3. In the field of planning -- cooperative planning procedures involving thousands of farmers plus technicians and administrators.

4. In the field of action -- 125,000 community and county AAA committeemen, 15,000 FSA personnel, 16,000 SCS personnel, 7,500 Forest Service personnel, CCC camps, soil conservation district supervisors, etc.





G. WHAT WE CAN DO NOW

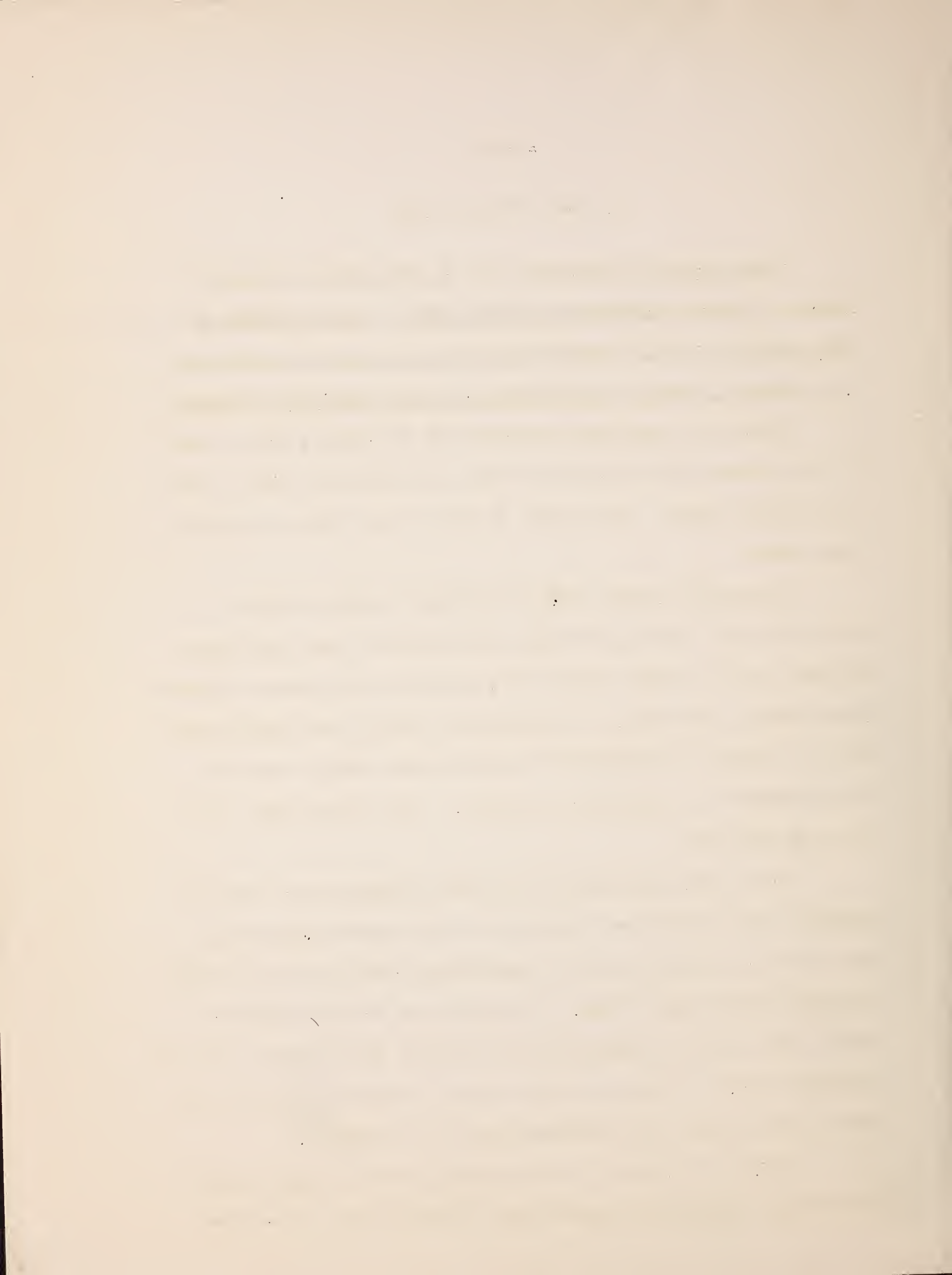
(This section is tentative. It is here merely to show the direction committee conversations are taking. Before material on this subject is used by information people, it should be checked by F. F. Elliott, Bureau of Agricultural Economics committee chairman.)

Despite the remarkable progress made in recent years, we must in all frankness admit that we have not yet stemmed the tide of soil and fertility losses. As to soil, we are not yet even on a maintenance basis.

Fortunately, local, State, and Federal people now know a great deal more than they did only a few years ago about land capabilities and the precise conservation practices and measures required under varying conditions. It is therefore possible and wholly desirable to reorient all agricultural programs more firmly, more definitely toward the conservation objective. This will be done -- in fact, is being done.

For the past month many of us in the Department have been re-studying every legislative authority and all programs to determine just how we can obtain a greater conservation result from each dollar expended and each day of work. We have done so from two points of view: First, what is administratively possible under present laws and appropriations? Second, what further may be required that will call for specific reports and recommendations to the Congress?

Within a few weeks we shall announce specific changes in the agricultural adjustment, conservation, rehabilitation, and related



programs that will point our efforts still more truly on conservation of land resources. We can indicate them, at least in a general way, to you now.

Before doing so, however, it should be emphasized that administrative changes in programs, efforts for greater coordination of programs, or public addresses about conservation will come to little unless they are in harmony with and in response to the informed convictions of farmers themselves. That is why the community, county, and State land-use planning work is the very heart of a national conservation effort. Farmers are today meeting in groups all over the country, mapping their resources, studying economic and social influences, and in the light of basic facts, are formulating sound agricultural programs for their localities. Good land use -- conservation -- is the common denominator of all these local plans.

Our first administrative action within the Department, therefore, has been to call upon the action agencies to participate to the fullest -- as set forth in the Mount Weather agreement -- in the local planning work; the next step is to help carry out those plans or, if for any reason the precise recommendations can not be met, to explain fully why not.

#### I. -- The Agricultural Adjustment Administration

The A.A.A. can do much in 1940, more in 1941. In cooperation with the Extension Service, the A.A.A. can carry on intensive educational work to acquaint all farm cooperators with facts about run-off and erosion on land where contour farming is practiced as compared to





farming not on the contour and emphasize the need for this practice where it is practicable. The A.A.A. may be able to increase somewhat the funds available for carrying out soil-building practices.

We shall write to every A.A.A. committeeman asking that he get the cooperation of the county agent, college specialists, S.C.S. technicians and others in obtaining information on the conservation practices most effective for his area. The committeeman would then be able in preparing farm plans with farmers, or notices of intention to participate in the 1940 agricultural conservation program, to emphasize the soil-building practices most needed but not now carried out.

In the 1941 program, much more can be done. The extent to which progress is made will depend largely upon the county planning committees, A.A.A. committees, and farmers generally informing themselves and determining the major changes and practices required in each community. But by 1941 it will be possible, for example, for the program to contain a provision that at least 50 percent of the credit for meeting the soil building goal must be obtained from designated practices needed in the county but which are not now carried out on most farms. Other equally effective conservation provisions are wholly desirable. Indeed, when the advance of education makes it possible, all A.A.A. payments to farmers can be conditioned upon full protection of their farms against wind and water erosion.





## II. The Farm Security Administration

The Farm Security Administration can do a great deal. Every farm and home management plan -- the basis of a rehabilitation loan -- can contain at least those conservation practices necessary to the maintenance of the soil resources of the farm. The same is true of the tenancy program. Here, county agents and specialists of the Land Grant Colleges and of the Soil Conservation Service can give valuable assistance.

## III. The Soil Conservation Service

The Soil Conservation Service has been reducing, as rapidly as possible, the funds expended on intensive demonstration projects in order to release its resources for help to local soil conservation districts. The Soil Conservation Service can give more technical assistance to the Agricultural Adjustment Administration and the Farm Security Administration and thus get more extensive adoption of correct conservation practices.

## IV. The Flood Control Program

For two years we have been making watershed surveys under the Flood Control Acts of 1936, 1937, and 1938. We were late in getting started on the land treatment phases of flood control. We are many years behind the engineers. But we have completed a great many preliminary examinations and more than a dozen intensive surveys are about completed. It is now time for action. We are strengthening the watershed flood-control organization of the Department. The land phase of flood control may, in the long run, prove to be our more complete and extensive conservation effort.

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## V. The Forest Service

The Forest Service will soon present a broad national program to the Joint Congressional Committee established at the request of the President. Under existing authority, the Forest Service may be able to give more assistance to the Soil Conservation Service, and State Extension and forestry agencies, in promoting sound farm forestry programs.

## VI. The Farm Credit Administration

The Farm Credit Administration can be helpful. Lands not protected from wind and water erosion are a bad credit risk. Further, submarginal lands acquired by foreclosure should not be resold to private individuals to suffer upon while inducing further physical soil losses.

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This will indicate that we can, if we set out hearts and our minds to the job, reorient certain public programs to help the American conservation army carry on the war at our feet.

Now, just as the local planning committees are the key to intelligent Federal assistance, so are they the key to invigorated State assistance. If the county planning committees find, as the result of intelligent study, that zoning is needed in their counties, will State leaders respond? If the farmers find that the present tax system makes shifts from undesirable land use to sound land use (such as a shift from grain to grass) impossible, will State leaders roll up





their sleeves and tackle the problem? County committees already are recommending classifying and putting tax-reverted lands to good use, formation of cooperative grazing associations and soil conservation districts, and a host of other actions which only the States have the constitutional power to do.

All this presents to the Extension Services their greatest challenge. The center of all action in a democracy is education -- informed public opinions. Privately owned lands may be abused, misused, or conserved, depending largely upon the wishes of those who own or use the land. Local, State, and Federal agencies can give assistance, but only if the individual wishes it. In turn, it is self-evident that the maintenance of democracy is bound up with the maintenance of the basic resource from which we draw our food and fibre.

If we deliberately looked for a moral equivalent to war as it is known in the Old World, we could find nothing better than to focus our national will on the war at our feet. It is entirely up to us, as a democratic people, to determine whether we shall maintain the rich resources basic to the civilization we have and hope to build. The war for survival which needs most concern us now is not in Europe, and not in Asia, but on the ground at our feet. If we are looking for what James called a moral equivalent for war, we may have it here.

